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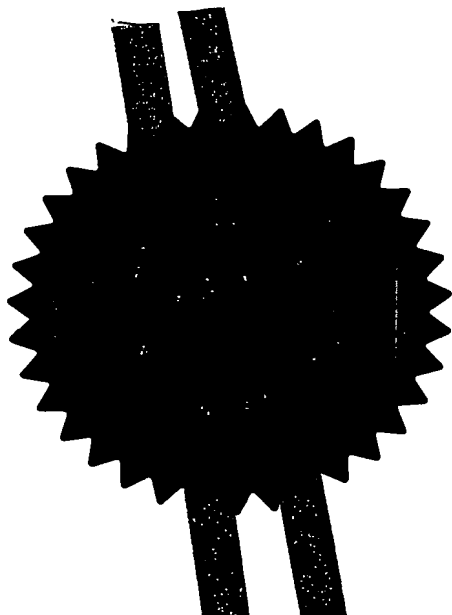
PCT

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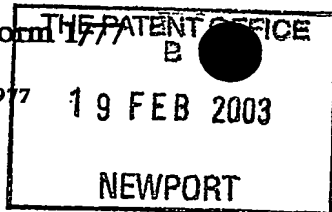


Signed

H. Behan

Dated

11 November 2003



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19FEB03 E785925-1 E18036
P01/7700 0.00-0303726.4

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1. Your reference 01/100

2. Patent application number
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0303726.4

3. Full name, address and postcode of the or of each applicant (underline all surnames)

BRIAN HARTLEY
12, OAKLEY AVE.
BROCKWELL
CHESTERFIELD
S40 4DS

Patents ADP number (if you know it)

If the applicant is a corporate body, give the country/state of its incorporation

5725627002 UK

4. Title of the invention

PAINT SPRAYING DEVICE

5. Name of your agent (if you have one)

"Address for service" in the United Kingdom to which all correspondence should be sent (including the postcode)

AS ABOVE

Patents ADP number (if you know it)

6. If you are declaring priority from one or more earlier patent applications, give the country and the date of filing of the or of each of these earlier applications and (if you know it) the or each application number

Country
U/K

Priority application number
(if you know it)

G.B. 0224052.1

Date of filing
(day / month / year)
16 / 10 / 02

7. If this application is divided or otherwise derived from an earlier UK application, give the number and the filing date of the earlier application

Number of earlier application

Date of filing
(day / month / year)

8. Is a statement of inventorship and of right to grant of a patent required in support of this request? (Answer 'Yes' if:

a) any applicant named in part 3 is not an inventor, or

b) there is an inventor who is not named as an applicant, or

c) any named applicant is a corporate body.

See note (d))

Patents Form 1/77

9. Enter the number of sheets for any of the following items you are filing with this form.
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Description 4

Claim(s)

Abstract

Drawing(s) 5 DRAWINGS ON 3 PAGES

10. If you are also filing any of the following, state how many against each item.

Priority documents

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Statement of inventorship and right to grant of a patent (*Patents Form 7/77*)

Request for preliminary examination and search (*Patents Form 9/77*)

Request for substantive examination (*Patents Form 10/77*)

Any other documents
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11. I/We request the grant of a patent on the basis of this application.

Signature B. Hartley

Date 18/2/03

12. Name and daytime telephone number of person to contact in the United Kingdom

01246 - 55 0047

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Notes

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PAINT SPRAYING DEVICE

This invention relates to paint spraying devices which are hand held.

One problem associated with paint spray devices is the frequent need to clean them after use and also that they can require frequent topping up with paint. They can also be a strain on the hand particularly when a paint dispenser is full and attached to the spray gun head.

There are at present spraying devices which are hand held and attached by a tube to a separate canister. There are also spray guns with canisters attached; these can also be expensive.

The following invention seeks to provide a method whereby the operator of such products can have a cheap alternative and the versatility provided by a device which is also easy to clean, and may also have throw-away parts as an alternative to cleaning should the operator decide to discard them.

The main driving force of the device is provided by an electrically operated vibrator which can use the mains electrical supply or a battery.

The section containing the vibrator can have a handle fitted to the main body of the gun or it may be fitted on the jar. This allows it to be fitted to the top of a tin containing a suitably diluted liquid which will pass easily through a spray jet head, for example fence protective liquid. This reduces the necessity to keep frequently filling a separate container which is usually attached to such spray guns. It also reduces the need to have to clean containers after use.

To enable the vibrator mechanism to be fitted to the top of a tin containing paint, a hole has to be made in the lid; this is done by the use of a specially shaped spike which can be hammered or pushed into it. The bottom of the vibrator mechanism has a threaded section which is placed through the hole and a collar is then screwed onto this when the lid has been removed. A rubber washer is used between the threaded section and the collar to stop any leakage of paint. The section which is threaded has a piece shaped in the centre to allow a tube with filter on the bottom to be pushed into it. Several tubes varying in length with detachable filters can be provided to reach to the bottom of tins that vary in depth, or a flexible tube could be used.

An adapter to replace the jet spray assembly, which is fitted on the spray gun to allow a small bore tube to be fitted to it, and a handle equipped with a jet attached to the other end. The tube and handle can be made cheap enough to throw away after use, and even the section containing the piston and jet assembly can be made cheap enough to throw away to alleviate the need for cleaning.

Should the need arise for a small quantity of paint to be used, this can still be used in a separate container which has a handle attached to it, on the main body of the spray gun. To operate the vibrator when it is connected to the mains or battery voltage supply, a switch is suitably positioned on the side of the body containing it if the handle is on the jar. The switch is situated so that it can be suitably operated because the separate container's handle lines up with it. This is possible because the section housing the vibrator mechanism has a section either side of it that protrudes and has holes through them. These line up with sections that protrude on the separate container; two screws are used to secure them together and a rubber seal is fitted between to stop any liquid which may be in the container from leaking out.

In a further example a spray gun is shown having a separate section that contains the jet and its associate mechanism. The body containing these parts can either be made to screw into the main body of the spray gun, or be pushed in and retained using a bayonet fitting, or held in place using screws. The seals used to seal the components could be of the 'O' ring type or flat rubber - with faces to suit.

The purpose of the separate section containing the jet and associate mechanism is so that the complete assembly can be made cheap enough to be discarded, or a separate part could be provided to allow one to be soaking in cleaning fluid whilst the other is being used.

Although some spray guns may have parts such as the jet assembly that can be replaced, it still leaves the main body of the spray gun where the parts have been fitted covered in paint. This means that the main body of the spray gun has to be cleaned or left to soak in cleaning fluid. Having a separate throw-away section, which can also include some of the ports where paint passes, could save time in cleaning and also allow for a more efficient spray gun.

Embodiments of the present invention will now be described by way of example only, with reference to the accompanying drawings in which:

Fig 1 This is a side view of the section containing the vibrator mechanism to a tin of fence paint.

Fig 2 This shows the tool ready to pierce the tin of liquid.

Fig 3 This is a side view of the separate paint container vessel.

Fig 4 Is a split drawing of the separate section of the spray.

Fig 5 Is a split drawing of the spray gun assembly.

Referring to Fig 1

A shaped section 1, of material which contains a vibrator and a pump mechanism attached to a tin of paint 2, using a collar 3, which is threaded onto a section of the shaped section 1, which has been passed through a hole in the lid 4, and is also threaded to accept it. Tube 20, attached to it, with a filter 21, on the end, and this passes down into the bottom of the liquid in the tin 2.

Referring to Fig 2

This shows a tool 5, with a spike on the end 6, this is either hammered or pressed into the lid 7, of the tin of paint 2, to create a hole for the threads on the shaped section 1, Fig 1, to fit through and then be held in position by the collar 3, Fig 1. the tool 5, has a section 8 which protrudes around its circumference to prevent it being driven too deep into the lid, 7.

Attached to one end of the shaped section 1, fig 1, is a flexible tube 9, the other end of the tube is fitted to a handle 10, which is hollow to allow the liquid to pass up it to a jet 11, which is screwed onto the end. The liquid from the tin of paint 2, can then pass from the tin when the vibrator has been connected to the electric supply, it will then spray 12, out of the jet 11.

To connect the vibrator to the mains electrical supply a cable 13, with a suitable plug head 14, is used. The switch 22, Fig 1 is used to switch the electrical supply on or off.

Referring to Fig 3

This shows a separate container 15, for use when paint has to be thinned before use. The shaped section 1, Fig 1, has flanges 16, which protrude either side with holes through them. When the separate section 1, is placed on the top of the separate container 15, these line up

wi's 17, which has holes in them and are threaded. Two screws 18, are used to secⁿ together, a rubber washer 19, stops any leakage.

Ref to Fig 4

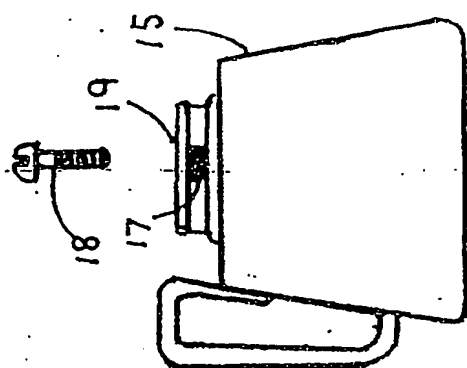
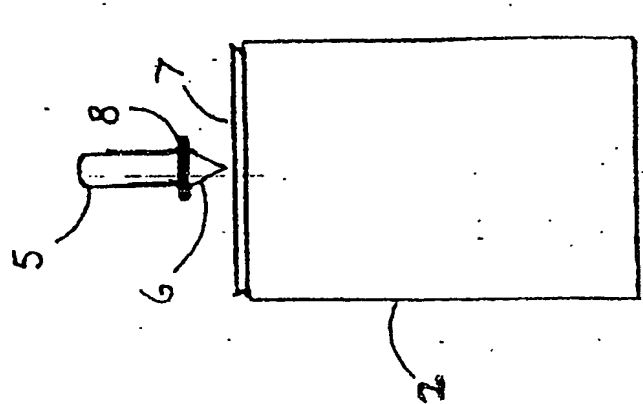
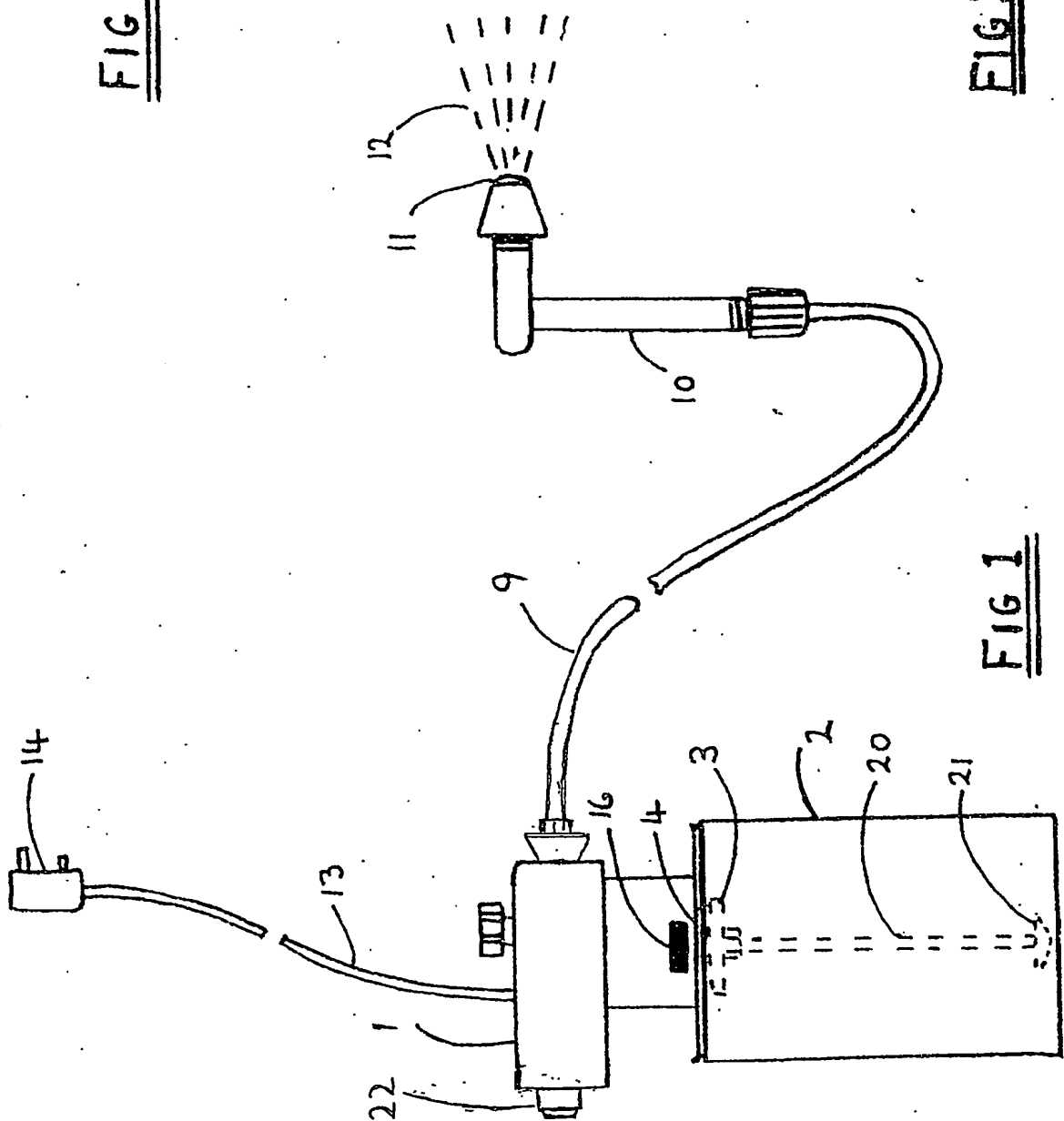
Shows the separate section 23, which contains the piston and spraying assembly, all of which can be made cheaply enough to throw away if necessary. The assembly has threads 24 on the outside to allow it to be threaded into the main body of the spray gun 25, Fig 5. On the outside of the separate section 23, three 'O' rings 26, 27, 28, are fitted. These are there to keep the ports of the spray gun separated. On the end of the separate section 23, a jet assembly 29, is screwed on. This can be replaced if required by an adaptor so that the tube 9 in Fig 1, is required to be attached.

Referring to Fig 5

This shows a spray gun 25, with the separate section 23 screwed into it, and showing the three 'O' rings 26, 27, 28 in position. A handle 30, is attached to the main body of the spray gun 25 with a switch 31 fitted into it. A paint container 32 is screwed onto the bottom of the main body 25, of the spray gun.

The spray gun 25 is connected to the main electrical supply by the cable 33, and plug head 34. It is then operated by pressing the switch 31, which operates a vibrator.

Whilst endeavouring in the foregoing specification to draw attention to those features of the invention believed to be of particular importance, it should be understood that the Applicant claims protection in respect of any patentable feature or combination of features hereinbefore referred to and/or shown in the drawings, whether of not particular emphasis has been placed thereon.



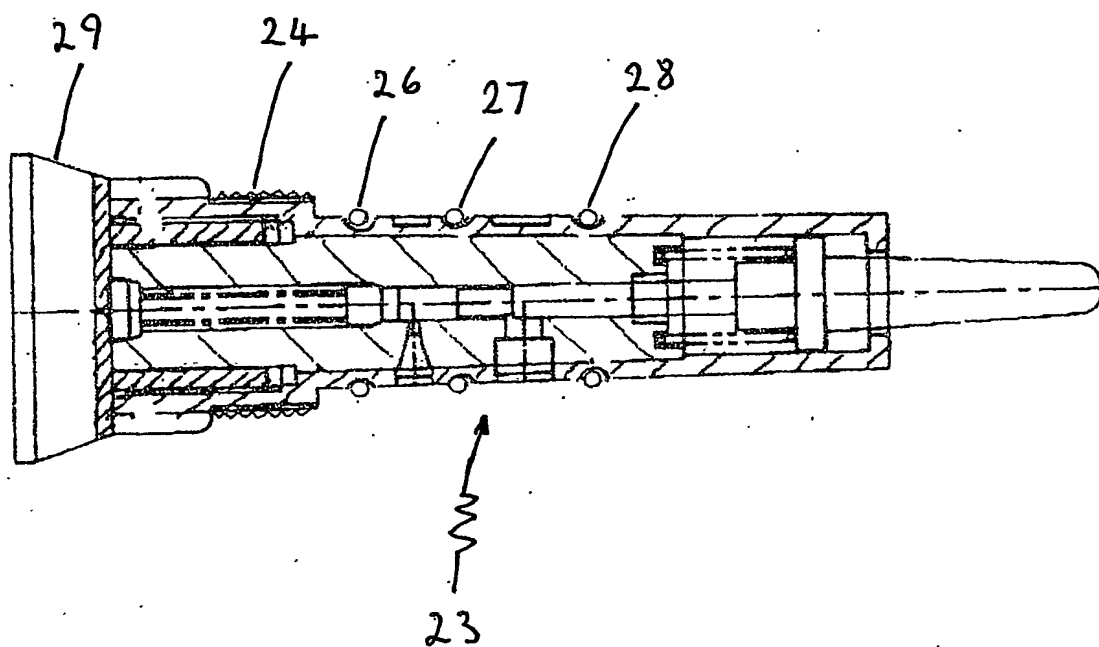


FIG. 4

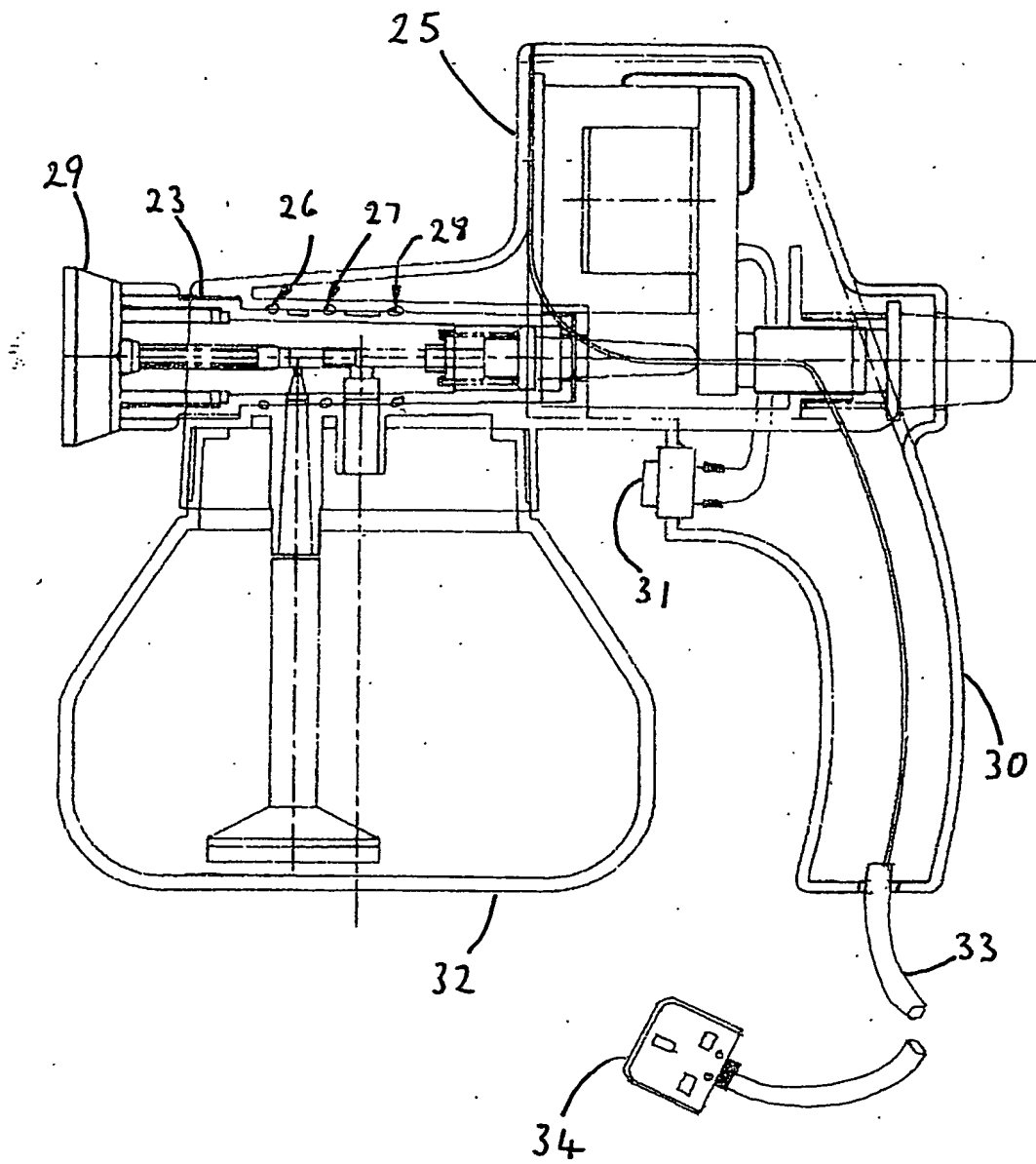
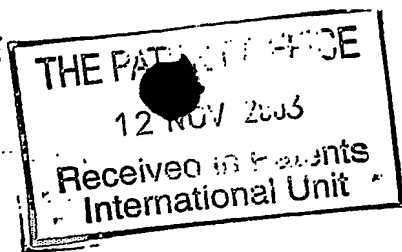


FIG. 5



PCT Application

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